transplant is to be considered and when a sufficient number of birds are obtained, it is recommended that they be released in the Hualapai and/or Three Bar Wildlife Area in the Mazatal Mountains of Mohave and Gila Counties. Biological reconnaissance of these candidate areas for transplants would determine the locations for release sites. Factors to be considered would be the availability of free water, composition and variety of the chaparral community and the presence of absence of seral stages. Should transplants prove successful, birds could be trapped from these areas and introduced into the Bradshaw and other chaparral ranges.

52. Brown, D. E. 1980. Sex ratios, sexual selection and sexual dimorphism in quails. J. Wildl. Manage. 44:198-202. **Excerpt**: Unfortunately, comparable data do not exist for the strikingly colored monomorphic mountain quail (*Oreortyx pictus*), which may have a different evolutionary strategy than other quails. For example, male mountain quail exhibit the greatest parental investment of all quail (e.g., development of brood patch, incubation, defense of young) (Gutiérrez, 1977).

53. Brown, D. E., A. Sands, S. Clubine, and C. E. Braun. 1993. Strategic plan for quail management and research in the United States: issues and strategies -- grazing and range management. Pages 176-177 in K. E. Church and T. V. Dailey, eds. Quail III: Natl. Quail Symp. Kans. Dept. Wildl. and Parks, Pratt. **Excerpt**: Livestock grazing has impacted populations of all species of quail in North America. Issues concerning the effect of grazing on wildlife populations, especially those related to public lands in the West, are among the most contentious and hotly-debated topics in the natural resource arena. There were 4 major topics on which participants in this workshop session reached a consensus: (1) the issue of livestock grazing fees on public lands is more of an economic issue than a wildlife management one, (2) implementation of on the ground grazing improvements should be brought about by increasing public awareness through the media, (3) the need for an ecosystem approach to range management and native quail restoration as opposed to specific livestock management prescriptions, and (4) the need for financial and social incentives for better management of private and public rangelands. Topics 2-4 will provide the basis for structuring the issues and strategies listed below.

54. Browning, M. R. 1977. The types and type-localities of *Oreortyx pictus* (Douglas) and *Oreortyx plumiferus* Gould. Proc. Biol. Soc. Wash. 90(4):808-812. **Excerpt**: There are two northern races of the North American species known as *Oreortyx pictus* (Mountain Quail). According to the fifth edition of the A.O.U. Check-list of North American birds (1957), the dark form on the west side of the Cascade Mountains from northwestern California northward to western Washington is *O. pictus palmeri* Oberholser, 1923. The other, a pale race, is found east of the Cascade Mountains in eastern Washington southward to east-central California, and is called *O. p. pictus* (Douglas, 1829). *Oreortyx plumiferus* (Gould, 1837) was synonymized with *Oreortyx pictus pictus* by Oberholser (1923). A critical appraisal of the pertinent literature and the existing types reveals that the name

plumiferus should be applied to the pale form and *pictus* to the dark form. This is a return to the treatment in the third (1910) and earlier editions of the A.O.U. Check-list. The remainder of this paper documents the evidence supporting this arrangement.

55. Bryan, M. 1901. A study of the birds of Santiago Canyon. Condor 3:103-104. **Excerpt**: I discovered a flock of Plumed Quail dusting in the dry earth below me. One was waiting about, plume erect, keeping guard while the others enjoyed their bath. What beautiful birds, and how seldom we see them so low in the mountains, but here at the foot of Santiago Peak they over-lap the range of the Valley Quail.

56. Bryant, H. C. 1912. The present and future status of the California Valley Quail. Condor 14:131-142. **Excerpt**: Three different species of quail are found within the confines of the State of California, the mountain quail (*Oreortyx picta*), the California valley quail (*Lophortyx californica*), and the Gambel or desert quail (*Lophortyx gambeli*) [sic]. The first is distinctly a high mountain bird and is seldom found below 3000 feet elevation.

57. Bryant, H. C. 1920. Edward Garner, a pioneer naturalist. Condor 22:32-33. **Excerpt**: Two interesting albinos are in the collection, one a Mountain Quail taken in Indian Valley by Kenneth Murray, October 4, 1907.

58. Burleigh, T. D. 1972. Birds of Idaho. Caxton Printers, Ltd., Caldwell, Id. 467pp. **Notes**: Author includes general information on habits, nest, and clutch size. Includes detail of quail sightings in Latah, Idaho, Nampa, Canyon, and Owyhee counties. States that mountain quail are locally common in suitable habitat in the western part of the state as far north as Latah County.

59. Capel, S., J. A. Crawford, R. J. Robel, L. W. Burger Jr., and N. W. Sotherton. 1993. Strategic plan for quail management and research in the United States: issues and strategies -- agricultural practices and pesticides. Pages 171-173 in K. E. Church and T. V. Dailey, eds. Quail III: Natl. Quail Symp. Kans. Dept. Wildl. and Parks, Pratt. **Excerpt**: Agricultural practices have broad-scale influences on quail populations. As time has passed, these once positive influences have now become largely negative. In spite of many problems faced by quail in contemporary, clean farmed agricultural environments, numerous proactive management and research opportunities exist. The participants for the Agricultural Practices and Pesticides portion of the Strategic Planning Workshop identified 3 broad categories of issues that have the greatest potential to impact quail populations in contemporary agricultural environments: (1) general habitat loss and strategies for development and improvement, (2) use and management of agricultural chemicals, and (3) agricultural programs and policies.

60. Cassirer, E. F. 1995. Wildlife Inventory, Craig Mountain, Idaho. Unpubl. Rep. Proj. No. 92-069. U.S. Department of Energy, Bonneville Power Administration,

Portland, Oreg. 183pp. **Notes**: Wildlife distribution and abundance were studied at Craig Mountain, Idaho, during 1993 and 1994. Several major drainages were surveyed for mountain quail using hunting dogs or recorded mountain quail calls. Habitat suitability for winter and breeding range are quantified as poor, fair, or good for most of the drainages surveyed. Mountain quail were heard calling in Eagle Creek drainage in 1993 and 1994 and in a China Creek tributary in 1993. Author concludes that mountain quail are present in low numbers on Craig Mountain but presence of good winter and breeding habitat makes this area a potential release site for future reintroduction efforts.

61. Caughlin, P. H., and E. Caughlin. 1938. Mountain quail at Baldy Messa Game Farm. Modern Game Breeding 8(7):4-5.

62. Church, K. E., J. R. Sauer, and S. Droege. 1993. Population trends of quails in North America. Pages 44-54 in K. E. Church and T. V. Dailey, eds. Quail III: Natl. Quail Symp. Kans. Dept. Wildl. and Parks, Pratt. **Abstract**: We used North American Breeding Bird Survey data (1966-91) to estimate distribution, relative abundance, and population trends of quails. Population trends in grassland/shrub birds sympatric with northern bobwhite (*Colinus virginianus*) were also examined. Northern bobwhite and scaled quail (*Callipepla squamata*) populations have declined since 1966. Rates of decline for these quails have increased during the past decade. California quail (*C. californica*), Gambel's quail (*C. gambelii*), and mountain quail (*Oreortyx pictus*) populations have been stable over the long-term (1966-91). However, the short-term (1982-91) trend for California quail is positive, whereas Gambel's quail appear to be declining. Patterns in tends indicate similar factors may be negatively affecting breeding populations of grassland/shrub birds throughout the bobwhite's range. We discuss plausible hypotheses to explain population trends and recommend future action.

63. Clark, H. W. 1930. Notes on the avifauna of a transition island in Napa County, California. Condor 32:50-52. **Excerpt**: Mountain Quail. Occasionally heard in the wilder parts of the region. One or two flocks have come onto the campus of Pacific Union College.

64. Clark, H. W. 1935. Fire and bird populations. Condor 37:16-18. **Excerpt**: From August 22 to 29, 1931, a severe forest and brush fire swept over Howell Mountain in Napa County, California, spreading eastward to Chiles Valley and northward beyond Middletown, Lake County. On the west side of the mountain, near St. Helena, the fire ran into a mass of chaparral and blue-oak woodland. One fire-fighter reported to me that he saw several Mountain Quail in flight. Sometimes they became confused and circled back into the blaze. Some were seen to burn in the flames.

65. Clark, W. H., and K. I. Giezentanner. 1978. Predation of ants by mountain quail in Nevada (Hymenoptera: Formicidae). Ent. News. 89:133-134. **Abstract**: Four

mountain quail, *Oreortyx pictus* (Douglas) were collected in northwestern Nevada in October 1972. Three of the quail were found to have fed upon worker ants; each contained a different species. *Formica subpolita* Mayr, *F. neogagates* Emery and *Camponotus* sp. were prey of the mountain quail. Ants formed a significant portion of the diet of these quail.

66. Cockrum, E. L. 1952. A check-list and bibliography of hybrid birds in North America north of Mexico. Wilson Bull. 64(3):140-159. **Notes**: Author lists the following crosses: (1) *Lophortyx californica* (Shaw) x *Oreortyx picta* (Douglas) California Quail x Plumed Quail. (2) *Lophortyx californicus californicus* x *Oreortyx pictus plumiferous*, Peck, 1911:149. (3) *Lophortyx californicus* x *Oreortyx* sp., Bailey, 1928:210. (4) *Lophortyx californica* x *Oreortyx picta*, Hachisuka, 1928:83.

67. Conservation Data Center. 1994. Rare, threatened and endangered plants and animals of Idaho. Third ed. Id. Dept. Fish and Game, Boise. 39pp. **Notes**: Mountain quail (*Oreortyx pictus*) is listed by the Idaho Dept. Fish and Game as a Species of Special Concern, Category A - Priority Species. Species of Special Concern are "native species which are either low in numbers, limited in distribution, or have suffered significant habitat losses." Category A species are those "which meet one or more of the criteria above *and* for which Idaho presently contains or formerly constituted a significant portion of their range (i.e., priority species)." U.S. Fish and Wildlife Service lists mountain quail as a C2 Candidate Species meaning "taxa for which information now in possession of the U.S. Fish and Wildlife Service indicates that proposing to list as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat are not currently available to support proposed rules. Further biological research and field study may be needed to ascertain the status of taxa in this category." The Bureau of Land Management considers mountain quail a Sensitive Species that is: "1) under status review by USFWS/NMFS; or 2) whose numbers are declining so rapidly that federal listing may become necessary; or 3) with typically small and widely dispersed populations; or 4) those inhabiting ecological refugia or other specialized or unique habitats." The U.S. Forest Service classifies mountain quail as a Sensitive Species in Regions 1 and 4 National Forests in Idaho: "Those animal species identified by the Regional Forester for which population viability is a concern as evidenced by significant current or predicted downward trends in population numbers or density or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution." Mountain quail's heritage rank is G4/S2: G4=throughout its range is "not rare and apparently secure, but with cause for long-term concern (usually more than 100 occurrences)"; S2=within the state of Idaho is "imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (typically 6 to 20 occurrences)."

68. Coues, E. 1874. Birds of the northwest: A hand-book of the ornithology of the region drained by the Missouri River and its tributaries. U.S. Geol. Surv. Terr.

Misc. Publ. No. 3. 791pp. **Notes**: Author includes a general description, distribution, specific sightings, calls, behavior, foods, and life history.

69. Coues, E. 1903. Key to North American birds. 5th ed. Vol. 2. Dana Estes & Co., Boston. **Notes**: Narrative provides detailed descriptions of *O. pictus* including plumage, range, body measurements, and some distinguishing characteristics of *O. p. plumiferus* and *O. p. confinis*.

70. Crawford, J. A. 1978. An albinistic mountain quail from Oregon. Condor 80:343-344. **Notes**: Author describes a partially albinistic Mountain Quail collected in the Willamette National Forest, Oregon. The bird was a 14 week-old male with approximately 40% of the plumage composed of albinistic feathers.

71. Crawford, J. A. 1980. The quail of Oregon. Oreg. Wildl. 35(6):3-7. **Notes**: Author includes information on habitat, roosting, food habits, migration, and abundance. Also includes a general assessment of the impact on hunting on quail numbers, their niche in the food chain, overall success of management practices such as stocking and habitat improvement, historical bag limits in California and Oregon, and effects of forestry practices.

72. Crawford, J. A. 1989. Mountain quail in Oregon: special report. Dept. Fish. and Wildl., Oreg. State Univ., Corvallis. 9pp. **Notes**: Author summarizes information about mountain quail in Oregon, including information on distribution of subspecies, abundance, ecological difference between subspecies, introductions and transplants, and recommendations for collecting mountain quail.

73. Crawford, J. A. 1994. Habitat use by mountain quail in eastern Oregon. Unpubl. Proposal. Dept. Fish. Wildl., Oreg. State Univ., Corvallis. 11pp. **Notes**: Project goals and objectives are 1) to provide management agencies with the information necessary to evaluate actual and potential mountain quail habitat to facilitate restoration of populations, 2) to clarify the taxonomic relationships between mountain quail populations in southwestern and northeastern Oregon, 3) to determine seasonal habitat selection, 4) to compare habitat selection data with data from mountain quail that have been reintroduced into restored habitat, 5) to determine seasonal diet and food selection, and 6) to describe movements and home ranges on a seasonal basis with emphasis on relation to cover type and water resources. A primary study area will be in northeastern Oregon for the collection of taxonomic, dietary, and habitat use information. A second area will be chosen as a reintroduction site, possibly in Baker or Malheur counties. Birds will also be collected from southwestern Oregon, in the Cascade Range in Douglas county and in the Coast Range in Lincoln county, for taxonomic comparisons.

74. Crawford, J. A., and M. Pope. 1994. Habitat use by reintroduced mountain quail in eastern Oregon. Unpubl. Sci. Prospectus. Unpubl. Rep., Oreg. State Univ., Corvallis. 9pp. **Notes**: This prospectus gives a statement of the problem, current

status analysis, project objectives, anticipated results, administrative scope, and funding for a mountain quail research project in eastern Oregon. Project objectives are to determine current and historic distribution and to compare taxonomic relationships among existing populations of Oregon mountain quail. Additional objectives are to identify the seasonal habitat selection, seasonal diet and food selection, survival rates, movements, and home ranges (especially in relation to water and cover type) of reintroduced mountain quail. Study results will be used to develop a reintroduction program for mountain quail.

75. Crispens, C. G. 1960. Quails and partridges of North America: a bibliography. Univ. Wash. Press, Seattle. **Notes**: Citations for mountain quail (*Oreortyx picta* Douglas) from Crispens' bibliography are included in this bibliography.

76. Dawson, W. L. 1923. The birds of California. Vol. 4. South Moulton Co., San Francisco, Calif. 513pp. **Notes**: Dawson presents information on *Oreortyx picta picta* and *O. p. confinis* including a detailed description, recognition marks, nesting, range of *O. picta* and *O. p. picta*, distribution in California, and authorities. Text contains a discussion of vocalizations, habitat, nesting, brooding, and roosting habits.

77. Dawson, W. L., and J. H. Bowles. 1909. The birds of Washington. Vol. 2. Occidental Publ. Co., Seattle, Wash. **Notes**: Information given for the mountain quail (*Oreortyx pictus*) and the plumed quail (*O. p. plumiferus*) includes a description, recognition marks, nesting characteristics, general range, range in Washington, authorities, and specimens. Discussion also includes the birds non-native status, behavior, vocalizations, habitat, foods, and differences between these two subspecies.

78. Degroot, D. S. 1934. Field observations from Echo Lake, California. Condor 36:6-9. **Notes**: Mountain quail are noted as nesting near Echo Lake during 1933.

79. Delehanty, D. J. 1995. High-tech advances provide a breakthrough in mountain quail research. Quail Unlimited 14(1):16-21. **Excerpt**: Using captive and wild birds, I have developed a method for identifying the sex of mountain quail from a small blood sample. (This was done in collaboration with Dr. Jon Longmire of the Los Alamos National Laboratory.) Thus, behavior can now be studied in relation to the sex of individuals. An example of the usefulness of this test is that I was able to confirm, for the first time, that wild male mountain quail are able to incubate eggs and rear young unaided by a female. Using the captive flock, I have been able to observe previously undescribed behaviors, vocalizations and social relationships among breeding quail. I am currently examining the survival rate of wild-trapped versus captively-reared mountain quail released to the wild.

80. Delehanty, D. J. 1995. Incubation and brood rearing by a wild male mountain quail.

West. Birds 26:46-48. **Excerpt**: Together, these observations imply that a single yearling male Mountain Quail successfully incubated and reared 13 young. Incubation and brood-rearing by males as a regular feature of Mountain Quail reproduction would have strong implications for our understanding of the reproductive and population dynamics of the species. For example, if female Mountain Quail are also able to incubate and rear young alone, which is likely, then "pairs" might be able to rear two broods during one breeding season by employing uniparental care for each brood. This could occur even where the breeding season is too short for two broods to be raised sequentially. Thus, the frequency of uniparental care by Mountain Quail merits further investigation.

81. Delehanty, D. J. 1997. Mountain quail reproduction and restoration in the Great Basin. Ph.D. Diss., Univ. Nevada, Reno. **Abstract**: I examined three aspects of reproduction and restoration of mountain quail (*Oreortyx pictus*), a poorly known ground bird endemic to montane brush zones of the far western United States and Baja California. I tested ability of mountain quail to use dietary xanthophyll as an environmental cue to gauge reproductive effort; degree of external and behavioral monomorphism, including sex-roles in ritualized display behavior; and release strategies for restoring breeding populations into the Great Basin. Mountain quail responded strongly to diets supplemented with the plant pigment xanthophyll. Supplemented females recrudesced their reproductive tracts more rapidly, laid more eggs, and laid at a greater rate than did controls. Captive females ate more green vegetation during the breeding season then did males. Reproduction of wild mountain quail in the Mojave Desert fluctuated annually, corresponding to availability of green vegetation. Because many vertebrates, including humans, sequester dietary xanthophyll into reproductive tissues, the role of xanthophyll in vertebrate reproduction merits further investigation. Gender of mountain quail could not be determined consistently using single external characters, but was indicated consistently by presence or absence of 48.5 kb [TCC]n microsatellite DNA fragments. Genetic testing of wild quail identified the first confirmed record of incubation and brood-rearing by a male mountain quail. Captive mountain quail exhibited many reproductive behaviors including ritual display behaviors shared between sexes. Two displays not previously described for New World quail (Odontophoridae) were the domination/subordination (d/s) display, and side-ways throwing. Quail used the d/s display to court by ritualistically subordinating themselves to opposite sex adults. Quail subordinated themselves to potential mates with greater frequency when they were housed with an intrasexual competitor than when no competitor was present. Additional behaviors included crowing, duetting, aggression, nest-building, egg-laying, plumage displays, and four phasianid display elements, i. e., lateral displays, tidbitting, high-stepping, and rear approach to copulation. Wild-trapped and captively-reared mountain quail suffered high mortality following experimental release. Increased survivorship, however, was associated with spring rather than autumn or winter release, adult rather than juvenile quail, and wild-reared rather than captively-reared mountain

quail. Spring release of wild-trapped mountain quail may aid population restoration.

82. Delehanty, D. J., R. A. Tybie, M. J. Ditsworth, G. A. Hoelzer, L. W. Oring, and J. L. Longmire. 1995. Genetic and morphological methods for gender identification of mountain quail. J. Wildl. Manage. 59:785-789. **Abstract**: Mountain quail (*Oreortyx pictus*) breeding biology is poorly understood in part because sexes of birds cannot be readily identified. We demonstrated that presence or absence of high-molecular-weight microsatellite DNA of the repeated sequence thymine-cytosine-cytosine (TCC) accurately indicates mountain quail gender. Genetic methods correctly identified the sex of all 18 (12 F, 6 M) mountain quail tested. Additionally, for 30 of 31 captive mountain quail, we evaluated such morphological characteristics as plumage color of the neck, hypothesized to be associated with mountain quail gender. No single morphological characteristic (i.e., wing, tarsus, claw, and head plume length, body mass, and head width) consistently indicated gender. Despite controlling for age, stage of molt, and environmental factors among captive quail, presence or absence of olive feathers on key areas of the neck and upper breast failed to indicate gender for individuals within each sex. Three of 18 females resembled males in lacking olive feathers laterally on the upper neck. Three of 12 males resembled females in exhibiting olive feathers laterally on the lower neck. Using presence of olive feathers at the junction of pectoral and sternal feather tracts as a female-specific characteristic incorrectly indicated the gender of 3 of 30 (10.0%) quail (1 F, 2 M).

83. Dixon, J. S. 1943. Birds of the Kings Canyon National Park area of California. Condor 45:205-219. **Notes**: Author designates mountain quail as a common resident and includes a list of sightings, dates, and specific locations.

84. Douglas, D. 1829. Observations on some species of the Genera *Tetrao* and *Ortyx*, natives of North America; with descriptions of four new species of the former, and two of the latter genus. Trans. Linn. Soc. London 16:133-149. **Notes**: Author includes information on behavior, habitat, migration, food habits, nests and eggs, breeding, and a detailed physical description of the mountain quail.

85. Duszynski, D. W., and R. J. Gutiérrez. 1981. The coccidia of quail in the USA. J. Wildl. Dis. 17:371-380. **Abstract**: Intestinal contents from 12 scaled quail (*Callipepla squamata*), 10 bobwhite quail (*Colinus virginianus*), 20 harlequin quail (*Cyrtonyx montezumae*), 35 California quail (*Lophortyx californicus*), 15 Gambel's quail (*L. gambelii*) and 29 mountain quail (*Oreortyx pictus*) were examined for coccidian oocysts. Only 18 (14.9%) of 121 birds had coccidian oocysts in their feces at the time of collection; these included 9 *L. californicus* and 9 *O. pictus*. Four eimerians and an isosporan were found in the 18 infected birds. *Eimeria lophortygis* and *E. okanaganensis* were described previously from *L. californicus* but were also seen in *O. pictus*. *E. crusti* sp. nov. and *E. oreortygis* sp. nov. are described from *O. pictus*; *E. oreortygis* also was found in *L.*

californicus. Broadly ellipsoid oocysts of *E. crusti* had a rough outer wall, were 26.0 x 21.2 (24-28 x 20-23) mm and contained ovoid sporocysts 15.7 x 7.5 (14-18 x 7-9) mm. Micropyle and oocyst residuum were absent but a polar granule, sporocyst residuum, stieda and substieda bodies were present. Slightly ovoid oocysts of *E. oreortygis* had a smooth outer wall, were 24.4 x 18.7 (21-28 x 17-23) mm and contained ovoid sporocysts 14.1 x 7.2 (13-16 x 6-9) mm. Micropyle and polar granules were absent but a small oocyst residuum, large sporocyst residuum, stieda and substieda bodies were present. Oocysts of an isosporan were found and compared to oocysts of *Isospora lacazei* isolated from sparrows in a previous study.

86. Dwight, J., Jr. 1900. The moult of the North American Tetraonidae (quails, partridges, and grouse). Auk 17:34-51, 143-166. **Notes**: Author provides a highly detailed description of mountain quail in natal down, juvenile plumage, first winter plumage, and first nuptial plumage.

87. Edminster, F. C. 1954. American game birds of field and forest: their habits, ecology and management. Charles Scribner's Sons, New York, N.Y. 490pp. **Notes**: Edminster covers the Gambel's, mountain, and scaled quails by comparing origin and classification; descriptions; geographic range and distribution; habits (courtship, nesting, brood period, fall and winter seasons, voice, adaptability to changing environment); habitat; food habits; effects of weather and climate; predation; diseases and parasites; accidents; relations to man; productivity and populations; and management.

88. Edwards, G. O. 1959. Muscles of the pelvic limb in galliform birds. Am. Mid. Nat. 61:1-67.

89. Ehrlich, P. R., D. S. Dobkin, and D. Wheye. 1988. The birder's handbook: a field guide to the natural history of North American birds. Simon and Schuster, New York, N.Y. 785pp. **Notes**: A brief entry on mountain quail includes information on breeding, displays, nests, eggs, diet, conservation, parental defense, coveys, feeding behavior, and altitudinal migration. The authors also discuss dust bathing, brood patches, and effects of drought on quail reproduction and diet.

90. Einarsen, A. S. 1955. Observations on quail behavior. Murrelet 36:18-21. **Notes**: The author compares bobwhite, California, and mountain quail management and habitat in Oregon and Washington. Notes that mountain quail seem to do well for short periods of time in burned or logged areas in western Oregon and Washington. Discusses behavior of hand-reared birds and wild-caught birds as well as interactions between these two groups of birds when placed in pens together.

91. Elliot, D. G. 1897. North American game birds. Francis P. Harker, New York, N.Y. 220pp.

92. Emerson, W. O. 1887. Ornithological observations in San Diego County. Bull. Calif. Acad. Sci. 2:419-431.

93. Emerson, W. O. 1893. Random bird notes from Merced Big Trees and Yosemite Valley. Zoe 4:176-182. **Excerpt**: The day we entered the valley, June 19th, a bevy of downy young of the plumed partridge (*O. pictus plumiferus*) with the old ones ran across the road and scattered among the leaves.

94. Enderlin, R. W. 1947. The life history and management of mountain quail in California. Pittman-Robertson Q. 7(2):52. **Excerpt**: The fall migration of mountain quail from summer to winter ranges in the areas studied in Nevada and Sierra Counties was practically completed by the end of October. The migrating groups observed, which were mostly family groups, average 8.1 birds. The birds migrate by walking in single file and use roads, exposed ridges, or old flumes. No birds were found at high elevations during November and December. As previously reported, migrating birds frequently die in the manmade lakes. It is believed that this results from birds flushing, while moving along lake margins, and flying across the lake surfaces. Recovery of dead birds indicated that a high percentage of those lost are juveniles. Tests were made by releasing birds six feet above the surface of the lake. The greatest distance flown after release was 955 feet. Birds swam after dropping into the water but were unable to resume flight. Death was apparently caused by chilling and not drowning, as indicated by the reduced body temperature and subsequent death of recovered birds. Records of quail in hunter bags checked were maintained by the wardens. A total of 4,299 quail, checked in 32 of the 58 counties of the state, consisted of 3,577 valley quail, 650 mountain quail, and 72 Gambel quail. Valley quail comprised 83.2 percent of the bags checked and mountain quail represented 15.1 percent of the bags. Mountain quail were represented in the bags in 22 of the 32 counties tabulated. Covey studies during the summers of 1945 and 1946 resulted in counts of 119 adult birds and 755 young for an adult:young ratio of 1:6.51.

95. Evermann, B. W. 1886. A list of the birds observed in Ventura County, California. Auk 3:86-94.

96. Ezra, A. 1938. Successful breeding of the mountain quail (*Oreortyx pictus*). Avicul. Mag. 3(10):275-76. **Notes**: Author documents the successful captive breeding of mountain quail from the Greenhorn Mountains, California. Also presents information on nest building, egg laying, and subsequent care of the brood.

97. Ferry, J. F. 1908. Notes from the diary of a naturalist in Northern California. Condor 10:30-44. **Excerpt**: *Oreortyx pictus plumiferus*. Mountain Partridge. These birds were first met about 500 feet below the summit of South Yallow Bally Mountain on July 28, and were met thereafter almost daily during our stay here.

At this time there were many broods about and the parent birds harsh scolding note (somewhat recalling that of the Guinea-hen) was a characteristic feature of the thick chaparral. At Barney's Ranch this species was found in company with the California Partridge.

98. Fisher, A. K. 1893. Report on the ornithology of the Death Valley expedition of 1891, comprising notes on the birds observed in southern California, southern Nevada, and parts of Arizona and Utah. North Am. Fauna. 7:7-158.

99. Fisher, W. K. 1900. A list of birds observed on Mt. St. Helena, California. Condor 2:135-138. **Excerpt**: *Oreortyx pictus plumiferus*(?). Plumed Quail. This species is found on the upper slopes of the mountains in Transition. Its range overlaps that of *Lophortyx californicus* which is found on the lower slopes. Unfortunately I did not secure a specimen of this quail, but it seems probable from analogy that the form is referable to *plumiferus*, rather than to *pictus* straight which is found in the humid area near the coast.

100. Fisher, W. K. 1902. A trip to Mono Lake, ornithological and otherwise. Condor 4:3-11. **Notes**: *Oreortyx pictus plumiferus* was observed at Mono Lake in September 1901.

101. Fisher, W. K. 1904. Notes on the birds of Hoopa Valley, California. Condor 6:50-51. **Notes**: *Oreortyx pictus* are listed as occurring in or near this valley.

102. Forbush, E. H. 1917. Mountain Quail. Pages 5-8 in T. G. Pearson, ed. Birds of America. Vol. 2. **Notes**: A section on mountain quail includes a general description, nest and eggs, distribution, habitat, taxonomy, voice, reproduction, migration, and food habits.

103. Gabrielson, I. N. 1931. The birds of the Rogue River Valley, Oregon. Condor 33:110-121. **Excerpt**: *Oreortyx picta picta*. Plumed Quail. This is another common bird in the Cascades down to about 3000 feet, below which line it is gradually replaced by the California Quail. It has been seen in various localities along the summit from Snowshoe to the Ashland-Klamath Highway. The year 1926 seems to have been very favorable to these birds, as large coveys of them were numerous in the mountains during the last half of July. One nest containing eight eggs was discovered on Butte Creek, June 10, 1921.

104. Gabrielson, I. N., and S. G. Jewett. 1940. Birds of Oregon. Oreg. State Univ. Press, Corvallis. 650pp. **Notes**: Authors include a description of *Oreortyx picta palmeri* and *O. p. picta* and information on the downy young, nests, eggs, and distribution. A brief discussion of habitat requirements and habits are included.

105. Gambel, W. 1849. Remarks on the birds observed in Upper California, with descriptions of new species. J. Acad. Nat. Sci., Phil. 2(1):215-229.

106. Gifford, D., D. Hinz, P. Hofmann, and T. Roscoe. 1995. Report on the status of the mountain quail (*Oreortyx pictus*) in California. Game Bird Heritage Program, Calif. Dept. Fish and Game, Region II. 35pp. **Abstract**: The mountain quail (*Oreortyx pictus*) is a species of resident bird that has received relatively little attention by researchers. The Department of Fish and Game is interested in increasing it's knowledge of the status of the mountain quail in California. Using information in the scientific literature and in Department of Fish and Game files we developed a map of the species' current range, estimated it's statewide population, estimated the trend in population over the last 20 years, and provided a means to monitor population changes in the future.

107. Gilman, M. F. 1907. The gambel partridge in California. Condor 9:148-149. **Excerpt**: They range upward to at least 4000 feet and at favorable points are found in proximity to the Plumed Partridge (*Oreortyx pictus plumiferus*). At other places the Valley Partridge (*Lophortyx californics vallicola*) joins in and the three species occupy the same territory. At Snow Creek at the north base of San Jacinto Peak I have shot the three species and carried them home in the same bag. Near Banning mixed flocks of *gambeli* and *vallicola* have been seen and the Plumed, or Mountain Quail as it is more commonly called, only a short distance away. In canyons at Palm Springs the three can be found, and on Pinyon Flats, altitude of 4,000 feet, lying about fifteen miles south of Palm Springs, I have seen the three species drink from the same spring in course of half an hour.

108. Godin, A. J. 1960. A compilation of diagnostic characteristics used in aging and sexing game birds and mammals. M.S. Thesis, Univ. Massachusetts, Amherst. 160pp.

109. Gooden, S. K. 1953. A collapsible quail trap. J. Wildl. Manage. 17:389-391. **Notes**: This article gives instructions on how to assemble a light-weight, collapsible quail trap for capturing bob-white quail (*Colinus virginianus*).

110. Gould, J. 1837. On a new species of *Ortyx*. Proc. Zool. Soc. London 5:42-44. **Excerpt**: Mr. Gould then called the attention of the meeting to a new and beautiful species of *Ortyx*, a native of California, from the collection of the late David Douglas, and characterized it under the name of *O. plumifera*. . . He remarked that this genus was first brought before the Society eight or nine years ago by Mr. Vigors, at which time only five species were known, but since that period the number had been doubled; and from the remarkable development of the feathers forming the crest in the species then exhibited Mr. Gould anticipates the discovery of others, which shall connect *Ortyx plumifera* with those species in which this character is less prominently shown.

111. Gould, J. 1850. A monograph of the Odontophorinae or partridges of America. Richard and John E. Taylor, London. 23pp.

112. Grenfell, W. E., B. M. Browning, and W. E. Stienecker. 1980. Food habits of California upland gamebirds. Unpubl. Admin. Rep. 80-1. Calif. Dept. Fish and Game, Sacramento. 130pp. **Notes**: This report contains a mountain quail distribution map and extensive information on principal food items from several collection sites throughout California. Information is given for the Cascade Range, Klamath Range, southern Sierra Nevada, northern Sierra Nevada, Great Basin, south Coast Range, north Coast Range, and Transverse Ranges. Collection dates range from 1939-1976.

113. Grinnell, J. 1898. Birds of the Pacific slope of Los Angeles County. Pasadena Acad. Sci. Publ. No. II. 52pp.

114. Grinnell, J. 1902. Check-list of California birds. Cooper Ornithol. Club, Pacific Coast Avifauna No. 3. 98pp.

115. Grinnell, J. 1905. Summer birds of Mount Pinos, California. Auk 22:378-391. **Excerpt**: Mountain Quail were plentiful from 5500 feet elevation to the summit, and many broods of young were met with, particularly around the cienegas. Almost every one of the grassy pockets in the north slope of Mount Pinos held its family of quail. On the approach of an intruder these would flutter into the adjacent gooseberry thickets, where they would remain completely lost to observation for the time being.

116. Grinnell, J. 1914. An account of the mammals and birds of the lower Colorado Valley. Univ. Calif. Publ. Zool. 12:51-294.

117. Grinnell, J. 1915. A distributional list of the birds of California. Cooper Ornithol. Club., Pacific Coast Avifauna 11. 217pp. **Notes**: Author includes information on status, abundance, habitat, and detailed distribution for *Oreortyx picta picta* and *O. p. plumifera*.

118. Grinnell, J. 1925. The California state bird list at the end of 1924. Condor 27:76-77. **Notes**: Shows *Oreortyx picta confinis* Anthony (San Pedro Mountain Quail) as an addition to the California bird list.

119. Grinnell, J. 1928. A distributional summation of the ornithology of Lower California. Univ. Calif. Publ. Zool. 32:1-300.

120. Grinnell, J. 1932. Type localities of birds described from California. Univ. Calif. Publ. Zool. 38:243-324.

121. Grinnell, J., H. C. Bryant, and T. I. Storer. 1918. The game birds of California. Univ. Calif. Press, Berkeley. 642pp. **Notes**: This text includes a history of game legislation and hunting seasons in California, and refers to mountain quail bag

limits and seasons in a few instances. One section includes the following information for mountain quail (*Oreortyx picta plumifera*, and *O. p. picta*): other names, description of adults and young, marks for field identification, voice, nest, eggs, general distribution, and distribution in California. A narrative includes specific observations on nesting dates, nest sites, mountain and valley quail sympatry, brood sightings, calls, foods and feeding, roosting, and migration. A short discussion on the historical collection of mountain quail for San Francisco markets and on management strategies to increase numbers is also included.

122. Grinnell, J., J. S. Dixon, and J. M. Linsdale. 1930. Vertebrate natural history of a section of northern California through the Lassen Peak region. Univ. Calif. Publ. Zool. 35. 594pp. **Excerpt**: *Oreortyx picta picta* (Douglas) Interior Mountain Quail. This quail in summer frequented the chaparral-covered slopes and ridges in the belt between the altitudes of 4000 and 7000 feet. In addition to thickets of snow-brush and green manzanita, alder and willow thickets sometimes were included within ranges of individuals. Once, birds were heard calling from slopes covered with mountain mahogany. No knowledge has come to us of mountain quail occurring in mid-winter higher than about 3500 feet on the western slope of our section. In other words, it appears that the entire population that summers on the mountains above the 4000-foot level moves westward in the autumn, to winter in just about the same belt as do the black-tailed deer. **Notes**: General range and specific sighting locations are given throughout the study area. The authors include observations on calling, migration, and reproductive behavior as well as nest characteristics, clutch size, predator (human) avoidance, and crop contents. A specific account of one nesting female includes detail on time of egg deposition and collected egg weights is also included.

123. Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pacific Coast Avifauna 27. Berkeley, California. 608pp. **Notes**: The authors give information on the coast mountain quail (*Oreortyx picta palmeri* Oberholser), the Sierran mountain quail (*O. p. picta* Douglas), and the southern California mountain quail (*O. p. eremophila*). Includes synonyms, status (resident), geographic range, and habitat. Contained within the geographic range section are a multitude of reported sightings at various locations.

124. Grinnell, J., and T. I. Storer. 1924. Animal life in the Yosemite. Univ. Calif. Press, Berkeley. 752pp. **Notes**: This text includes general information on habitat distribution, field characters, occurrence, vocalizations, reproduction, predators, foods, flocking, abundance, and specific sightings in Yosemite.

125. Grinnell, J., and H. S. Swarth. 1913. An account of the birds and mammals of the San Jacinto area of southern California. Univ. Calif. Publ. Zool. 10:197-406. **Notes**: Authors include information on behavior and several sightings throughout the San Jacinto area, noting the number of birds seen, age composition of the covey, and proximity of other quail species. They compare the plumage of

Oreortyx pictus confinis and *O. p. plumifera* and recommend that all mountain quail in southern California be classified as *O. p. plumifera.*

126. Gruhn, R. 1961. The archaeology of Wilson Butte Cave south-central Idaho. No. 6. Occas. Papers Id. State Coll. Mus., Pocatello. **Notes**: The author documents the occurrence of mountain quail bones in the cave in stratum A, dates the stratum at 425 ± 150 years B. P. (A. D. 1535), and estimates the beginning of accumulation for stratum A around A. D. 1300.

127. Guiguet, C. J. 1955. The birds of British Columbia: (4) upland game birds. B.C. Prov. Mus. Handb. 10:38-40. **Excerpt**: The mountain quail, a western race of the plumed quail, originally occupied a range extending along the humid west coast of the United States from north-western Oregon south to Monterey County in California. In the early 1860's introductions were made to Washington, on San Juan and Whidbey Islands and others, and to British Columbia in the Fraser Valley and on Vancouver Island. These early introductions were not successful, but later introductions in the 1870's and 1880's apparently "took" in Washington and on Vancouver Island, and the birds, though not numerous, are still present in the Sooke hills, Highland District, and north sporadically as far as Duncan. There are records of the species from Wedder Mountain on the mainland taken in 1921, but to our knowledge no authentic mainland reports have been received since that time.

128. Gullion, G. W. 1951. Birds of the southern Willamette Valley, Oregon. Condor 53:129-149. **Notes**: Information is included on the size, topography, elevation, geology, climate, and watershed characteristics of the study area as well as a detailed map of the southern Willamette Valley, Lane County, Oregon. Author classifies the mountain quail as a rare permanent resident.

129. Gullion, G. W., and G. C. Christensen. 1957. A review of the distribution of gallinaceous game birds in Nevada. Condor 59:128-38. **Excerpt**: *Oreortyx picta.* Mountain Quail. In addition to the records cited by Linsdale (1936:49-50), and the more recent records for the Pine Forest, Virginia and Wassuk ranges, the Jackson, Pine Nut, Silver Peak and White mountains, and the Sierra Nevada of western Nevada, this species was recorded from Mount Moses in central Lander County on June 14, 1951, by Gullion and from the East Fork of the Jarbidge River at Murphy's Hot Springs, two miles north of the Idaho-Nevada state line, on November 20, 1953, by Hoskins.

130. Gutiérrez, R. J. 1975. A literature review and bibliography of the mountain quail, *Oreortyx pictus* (Douglas). USDA For. Serv. Spec. Rep., Calif. Reg. Office, San Francisco. 33pp. **Excerpt**: Since very little biological information is readily available on the mountain quail, the USDA Forest Service, California Region and I felt that there was a need to summarize the present state of knowledge of this bird. The primary purpose of this report, therefore, is to provide a concise review of this

knowledge. An attempt was made to include as much of the published and unpublished literature as possible, particularly of California. The second function of this paper is to provide an outlet for some of the unpublished summary Pittman-Robertson (P-R) research completed in California in the late 1940's. Finally, the extensive bibliography provides an initial route to those interested in further reading or studying the mountain quail.

131. Gutiérrez, R. J. 1977. Comparative ecology of the mountain and California quail in the Carmel Valley, California. Ph.D. Thesis, Univ. Calif., Berkeley. 103pp. **Excerpt**: Mountain Quail, *Oreortyx pictus*, and California Quail, *Lophortyx californicus*, range through all of California's plant communities except the driest deserts and highest spruce-fir, alpine zones. From our limited knowledge of the Mountain Quail, it is difficult to predict its ecological relationship with the California Quail although the United States members of the sub-family of Odontophorinae quails are frequently regarded as a closely related group (Johnsgard 1973). A zone of sympatry occurs annually at the upper limits of the California Quail's range when winter snows drive migratory populations of Mountain Quail from their high mountain homes. In other areas the quail are sympatric year-round, yet their relationships in either sympatric situation is unknown. I have proposed to study the relationship of these quail when they are in constant sympatry and to elucidate the natural history of the Mountain Quail.

132. Gutiérrez, R. J. 1980. Comparative ecology of the mountain and California quail in the Carmel Valley, California. Living Bird 18:71-93. **Excerpt**: Mountain and California Quail range through all of California's plant communities except the driest deserts and highest spruce-fir, alpine zones. A zone of sympatry occurs annually at the upper limits of the California Quail's range when winter snows drive migratory populations of Mountain Quail from their high mountain homes. In other areas the quail are sympatric all year, yet their ecological relationships in either sympatric situation are unknown. North American Odontophorinae quails, however, are regarded as a closely related group (Johnsgard, 1973). In this study I observed and quantified the modes of ecological segregation between the Mountain and California Quail where they are continually sympatric. Additionally, I have tried to elucidate the natural history of the Mountain Quail.

133. Gutiérrez, R. J. 1993. Taxonomy and biogeography of New World quail. Pages 8-15 in K. E. Church and T. V. Dailey, eds. Quail III: Natl. Quail Symp. Kans. Dept. Wild. and Parks, Pratt. **Abstract**: New World quail are a distinct genetic lineage within the avian order Galliformes. The most recent taxonomic treatment classifies the group as a separate family, Odontophoridae, within the order. Approximately 31 species and 128-145 subspecies are recognized from North and South America. Considerable geographic variation occurs within some species which leads to ambiguity when describing species limits. A thorough analysis of the Galliformes is needed to clarify the phylogenetic relationships of these quail. It is apparent that geologic or climatic isolating events led to speciation within New